

T. BLIXT & E. E. FROZETH.
SAFETY VAULT.
APPLICATION FILED APR. 24, 1917.

1,256,869.

Patented Feb. 19, 1918.
3 SHEETS—SHEET 1.

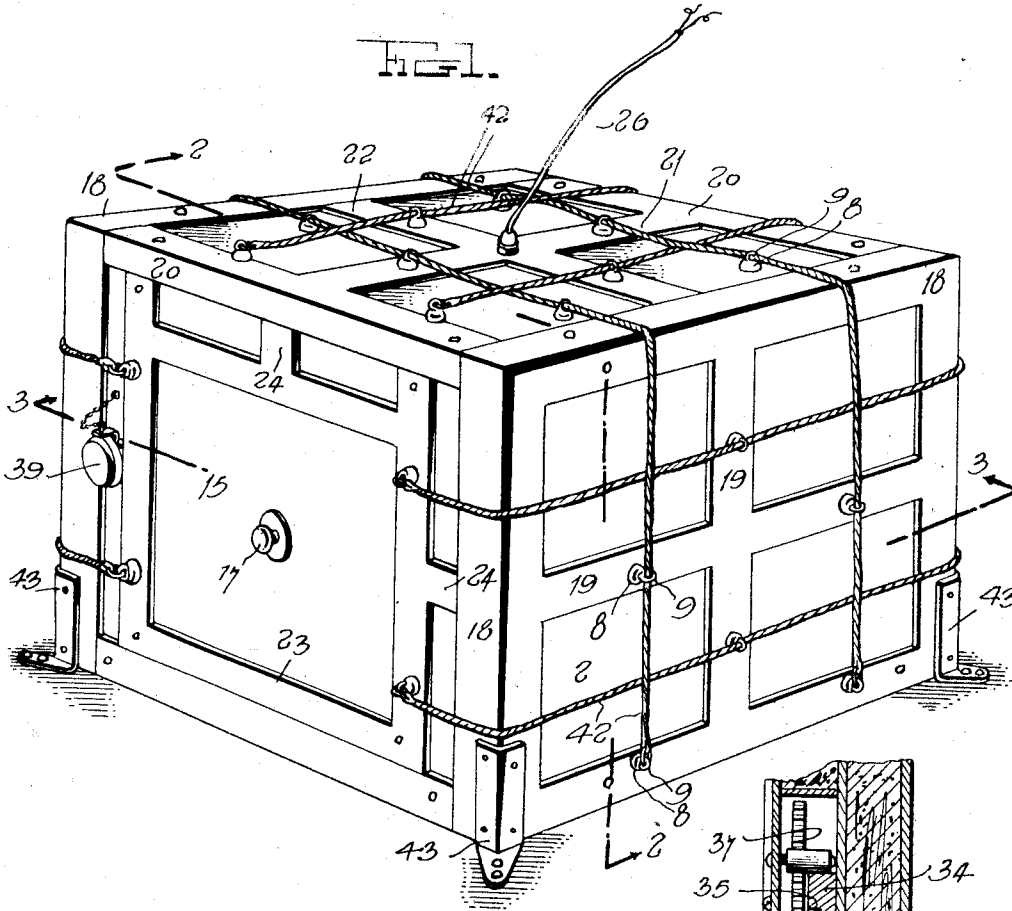
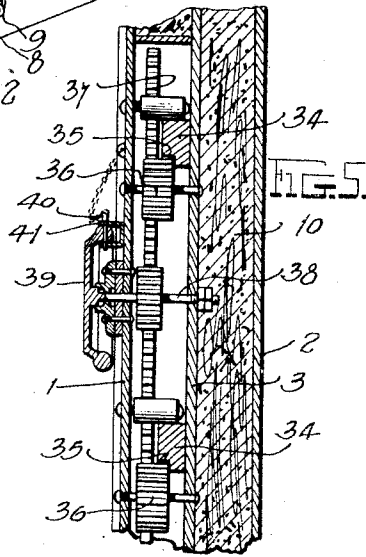
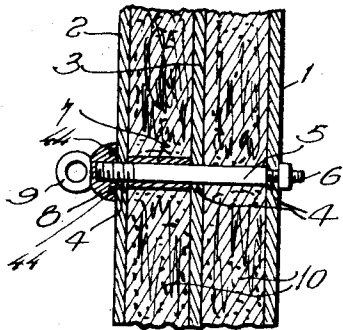


FIG. 4



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3 SHEETS—SHEET 2.

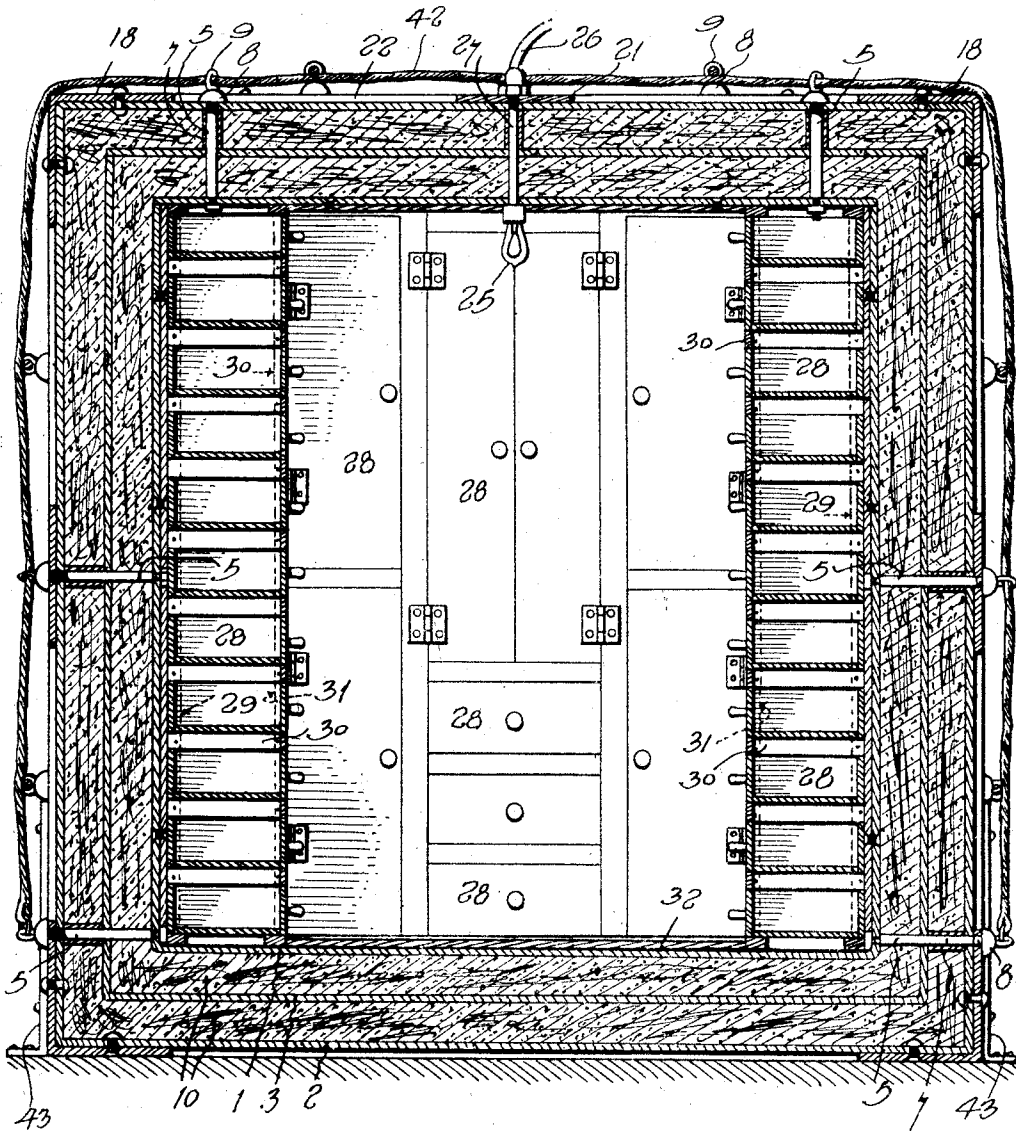


FIG. 2.

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3 SHEETS—SHEET 3.

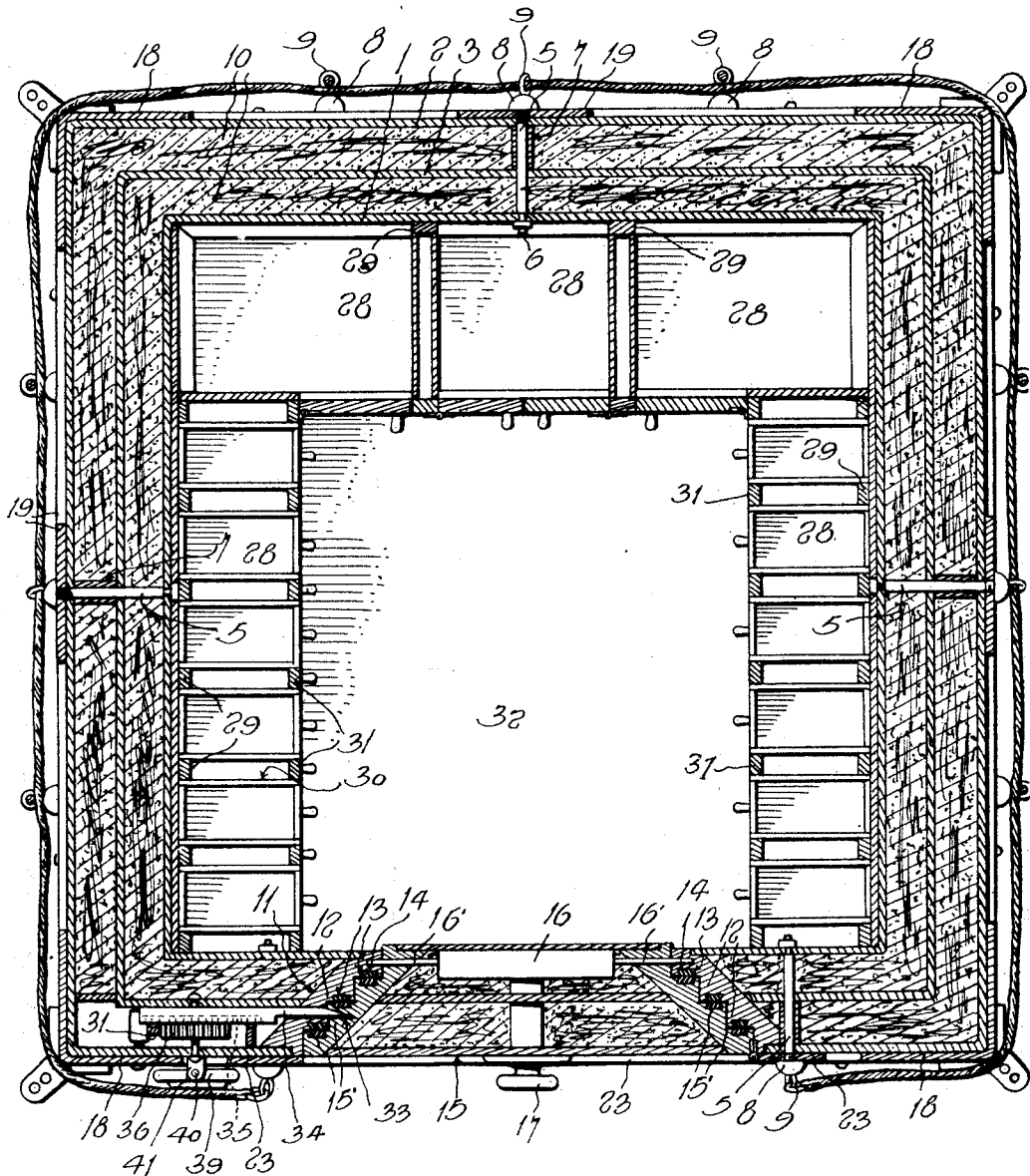


FIG. 3.

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UNITED STATES PATENT OFFICE.

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SAFETY-VAULT.

1,256,869.

Specification of Letters Patent.

Patented Feb. 19, 1918.

Application filed April 24, 1917. Serial No. 164,271.

To all whom it may concern:

Be it known that we, TERRY BLIXT and ERNST EMIL FROZETH, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Safety-Vaults; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in safety vaults and has for its primary object the provision of a device of this character in which valuable articles may be placed to insure them against being damaged by fire or water.

Another object of this invention is to provide a vault of this character which is well adapted for use as a life raft in the event the ship upon which it is carried is sunk or disabled.

A still further object is to provide a safety vault which is adapted to be mounted on the upper deck of a vessel between brackets in such a manner that should the vessel sink, the safe will free itself from the brackets and float upon the water.

With these and numerous other objects in view, our invention resides in the novel features of construction and in the arrangement of the several parts as illustrated in the drawings and more particularly pointed out in the specification and claim.

In the accompanying drawings:—

Figure 1 is a perspective view of the improved vault;

Fig. 2 is a vertical section on the plane of line 2—2 of Fig. 1;

Fig. 3 is a horizontal section on the plane of the line 3—3 of Fig. 1, including means for locking the vault against leakage;

Fig. 4 is a detail sectional view showing the means of securing the wall plates together; and

Fig. 5 is a vertical sectional view of the locking means for rendering the door water tight.

Similar numerals of reference are employed to indicate corresponding parts throughout the several views.

Reference is now had to the drawings in which our improved vault is shown comprising walls formed of inner, outer and intermediate plates 1, 2 and 3 respectively formed of sheet iron, steel or the like, said plates being provided at spaced points with alined apertures 4 as clearly shown in Fig. 4.

For the purpose of retaining the wall plates in proper spaced relation, bolts 5 are passed through the alined apertures and have their inner ends 6 reduced in diameter to form shoulders which abut the inner plates 1, said reduced ends 6 being screw threaded to receive nuts thereon. The outer and intermediate wall plates are held in spaced relation by spacing sleeves or collars 7 as shown in Fig. 4 of the drawings. The outer ends of the bolts are screw threaded and receive thereon cap nuts 8 which are provided on their inner faces with annular grooves adapted to receive a suitable packing 44 therein to prevent leakage of water through the alined apertures 4.

It will be therefore seen that when the nuts on the inner end of bolts 5 are tightened the outer wall will be forced against the spacing sleeve. The spacing sleeve will then be drawn against the intermediate metal plate, therefore any water which would seep beneath the outside nut must force itself against the pressure of the air in the inner chamber for the distance of the sleeve. It will thus be seen that practically speaking there will not be any leakage of water into the safe so the same can float for months without sinking.

The cap nuts are provided on their outer ends with eyes or rings 9 for a purpose to be hereinafter set forth.

In order to protect the contents of the safe from fire a filler of asbestos or the like is packed between the wall plates.

The vault is provided in one of its sides with a door opening in which is securely mounted a door frame 11 in the form of a casting having steps 12 which have grooves 13 therein for the reception of packing strips 14 of rubber or the like. Hingedly mounted on one side of the frame 11 is a suitable door 15 whose edges are formed

with steps 15' similar to those on the frame 11 and have packing strips similarly disposed on said steps and adapted to be brought into close contact with the strips on the frame.

This door 14 is adapted to be securely locked against opening by unauthorized persons by means of an ordinary combination lock 16 having reciprocating bolts 16' on the inner face of said door and an operating knob 17 on the outer face thereof.

The vault is reinforced by an open framework, the end reinforcing portions each being in the form of a rectangular angle iron structure 18 having suitable cross pieces 19, said framework being secured to the vault body in any desired manner, the aforementioned bolts 5 passing through a number of the crosspieces 19 as illustrated in the drawings.

The upper and lower reinforcing frameworks each comprise a pair of spaced parallel angle iron members 20 being connected by a cross piece 21 from each edge of which a bar 22 of the same thickness projects parallel with the angle member 20 and terminates at the inner edge of the angle member of the end reinforcing framework 18. The front wall of the vault is reinforced with flat metal bars 23 which extend around the door jamb 11 and have projections 24 terminating at the angle iron members of the end and upper frameworks (as shown in Fig. 1 of the drawings).

The interior of the vault is lighted preferably by an electric light bulb 25 to which current is supplied through a wire 26 which enters the vault through a pipe 27 secured in the wall thereof.

For the purpose of storing away valuables and the like a series of lockers and drawers 28 are arranged around the inner wall of the vault. The framework for the lockers comprises a plurality of parallel spaced vertically extending supports 29 around the inner wall of the vault, said supports having inwardly extending parallel spaced drawer and locker frames 30. The other ends of said frames 30 are supported by uprights 31 as shown in Figs. 2 and 3. The bottom of the vault is adapted to be covered by a wooden floor 32 secured to said bottom in any desired manner.

While the combination lock will prevent unauthorized persons from entering the vault, it will not insure the vault against leakage, and to make it waterproof, the edge of the door is provided with tapered sockets 33 adapted to receive the tapered ends of reciprocating locking bolts 34. The lower edge of each bolt 34 is provided with rack teeth 35 adapted to be engaged by a pinion 36 meshing with teeth on a vertically movable rack bar 37 which is reciprocated by a

main gear wheel mounted on a spindle 38 on the outer end of which is keyed an operating wheel 39.

When the door has been locked by the combination lock the wheel 39 is rotated, thereby forcing the tapered ends of the bolts 34 into the tapered sockets 33 whereby the packing strips on the door and jamb are squeezed together forming a water and airtight joint. The wheel is then locked by a pin or the like 40 which is projected through apertures in a U-shaped bracket 41 secured to the side of the vault and through an aperture in the wheel rim which is disposed between the arms of the bracket 41.

The above referred to locking mechanism is set forth in detail in a co-pending application, Serial No. 164,272, filed April 24, 1917.

In order that the safe when floating in the water may readily attract the attention of the crews of vessels passing by, said vault is provided with a bright paint of one color covering its entire surface with the exception of the reinforcing angle members and cross bars which are to be painted some other bright color.

As a means for identification of the safe, the name of the vessel upon which it is carried will be placed upon the door or any other suitable place.

For the purpose of rendering this vault valuable as a life raft, cables 42 are extended therearound through the eyes or rings 9 on the bolts 5 so that persons may hold onto them until rescued.

As a means for retaining the vault in proper position on a ship, upstanding angular brackets 43 are disposed at the corners thereof and have laterally bent feet attached to the deck of the ship. The vault is loosely retained between said brackets so that, should the ship sink, said vault will float free in the water.

From the foregoing description of the construction and operation of our improved safety vault, the manner of applying the same to use, and the operation thereof will be readily understood and it will be seen that we have provided a simple and efficient means for carrying out the objects of the invention.

We claim:—

A floatable safety vault having walls comprising inner, outer and intermediate metal plates, said plates being provided with a plurality of alined openings, bolts extending through said apertures said bolts having their inner ends reduced in diameter to abut said plate, said reduced ends being threaded, nuts on said threaded portions, spacing sleeves on said bolts between said outer and intermediate plates whereby when said nuts are tightened said spacing sleeves

will be drawn in watertight engagement with the outer and intermediate plates, cap nuts secured to the outer end of said bolts having eyes through which cord may be
5 passed to provide hand holds, said cap nuts being provided with an annular packing receiving groove in their inner side and suitable packing in said groove.

In testimony whereof we have hereunto set our hands in the presence of two sub- 10 scribing witnesses.

TERRY BLIXT.
ERNST EMIL FROZETH.

Witnesses:

L. F. LAMMERS,
D. W. GIBSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."